DOCUMENT RESUME

ED 249 522 CS 208 615

AUTHOR Steinbach, Rosanne; And Others
TITLE Teaching Independent Reflective Processes in Writing: A Follow-Up Study.
PUB DATE Apr 84
NOTE 11p.; Paper presented at the Annual Meeting of the American Educational Research Association (68th, New Orleans, LA, April 23-27, 1984).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Cognitive Processes; Cognitive Restructuring; Elementary Secondary Education; Followup Studies; Grade 6; Grade 7; *Planning; *Writing (Composition); *Writing Processes; *Writing Research

ABSTRACT

One year after sixth grade students participated in an instructional intervention experiment aimed at teaching reflective planning skills in writing, a followup study focused on evidence of reflectivity in attitudes and metacognitive knowledge concerning writing. This study was conducted with 16 experimental and 13 control students. Data were collected during individual interviews, consisting of questions and procedures that required students to: (1) detail advice they would give an aspiring young writer of their age, (2) provide an account of what they do when they write, and (3) discuss and sort according to mature and immature thinking a set of 18 planning phrases associated with expert (reflective) and novice (exhibiting one's knowledge) approaches to writing. The results indicated that the cognitive changes generated by the original intervention persisted in the experimental students. Subjects from both the experimental and the control group indicated awareness of two principles: that information or knowledge is important for essay writing, and that planning is a good thing. For the control group, these two principles appeared to mean the same thing--planning was essentially generating content. The experimental group students, however, generally showed an awareness of writing as a reflective rather than a knowledge-telling process, and of planning as consisting of goals, decisions about how to achieve those goals, and formulation of attitudes and main ideas. (HTH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

ED249522

Teaching Independent Reflective Processes in Writing: A Follow-up Study

Rosanne Steinbach
Ontario Insitute for Studies in Education

Marlene Scardamalia
York University

Carl Bereiter
Ontario Institute for Studies in Education

American Educational Research Association
New Orleans
April 1984

CS 208 615

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Rosanne Steinbach

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Objective

This study is a follow-up one year later of sixth-grade students who had taken part in an instructional experiment aimed at teaching reflective planning skills. The follow-up focused on evidence of reflectivity in attitudes and metacognitive knowledge concerning writing.

Perspective

During a five-month instructional intervention, a sixth-grade class showed significant gains in comparison to controls in the incidence of reflective statements in their planning protocols and in the rated reflectiveness of their essays (Scardamalia, Steinbach, & Bereiter, 1983). For several reasons it seemed important to collect additional data on experimental and control group students a year later. First, since the students all transferred to a different school after grade 6, there was no likelihood of continuing differential treatment. Consequently, any group differences that appeared could be validly attributed to residual effects of the experimental intervention. Second, informal observations during the experiment had suggested significant metacognitive changes that were only weakly reflected in the quantitative results. These included a more mature approach to notemaking (cf, Burtis, Bereiter, Scardamalia, & Tetroe, 1983), a better understanding of writing as a cognitive process, and a willingness to tackle difficult writing challenges rather than seeking the easiest way through an assignment. These important kinds of possible outcomes were not anticipated in the design of the initial evaluation, but seemed clearly to warrant investigation.

Methods and Data Source

The original experiment included 30 experimental students and 32 control students. The present experiment was conducted with 16 experimental and 13 control students (with interview data missing from one experimental subject due to a faulty tape). These

29 students comprised all those who had transferred to one particular school after grade 6, the remainder having transferred to several other schools.

Data were collected during individual interviews that lasted from 45 to 90 minutes and that had the general intent of tapping metacognitive understanding of the writing process. The structured interview consisted of questions and procedures that had students (a) detail the advice they would give an aspiring young writer of their age; (b) provide an account of what they do when they write; and (c) discuss and sort according to mature and immature thinking a set of 18 planning phrases (phrases never seen previously by the experimental or control students) associated with expert (reflective) and novice (using writing as an occasion to tell what one knows) approaches to writing.

Results

Students' metacognitive understanding of the composing process was analyzed in three ways. One analysis looked at the kinds of advice students would give to their peers and their own accounts of how they write. The second analysis looked at how students identified expert and novice planning strategies and the third dealt with their justifications for these choices.

Student accounts of the writing process suggest that they hold to a simple, linear model of the process. The basic model is that of generate relevant content, then write, then produce a good copy. This approach to writing is what Scardamalia and Bereiter (1982) call "knowledge telling." There are signs, however, that some students see the process more complexly. These students are aware that the very act of writing helps one plan, that planning is not something done only in advance of putting pen to paper. They also talk about the act of writing helping them to get their ideas out, but then they need to figure out what they really want to say and delete unimportant ideas. These

signs of understanding the act of writing as a tool for thinking, and of the interactive nature of writing and planning suggest what we shall refer to here as a "reflective" approach to writing. A classic expression of a reflective approach came from an experimental subject in the present study: "As I write, I plan, then the things come clear."

A. Advice to other writers and personal accounts of writing process

As a first effort to distinguish knowledge-telling from reflective views of writing among subjects in the follow-up study, we examined statements made by the students in response to queries about the writing advice they would give to another student and their own awareness of what they do when they write. Raters divided these statements into five categories: topic generation, content generation, translating, reprocessing, and rhetorical considerations. Statements in each of these categories were scored according to a four point scale with 1 being a straightforward knowledge-telling view and 4 indicating a relatively complex view of the composing process.

Since the total number of statements made varied greatly between subjects and the rated quality of those statements varied greatly both within and between subjects, there was no statistically significant difference between groups in mean frequencies. However, when we looked at the number of individual subjects who made a 50% or greater number of high level statements (those receiving a 3 or 4) in proportion to their total number of statements we found a substantial difference. Thirty-three percent of experimental subjects (5 out of 15) versus seven percent of control subjects (1 out of 13) scored 50% or better.

B. Identifying Expert and Novice Strategies

More specific understanding of the reflective processes whereby writing is used as

a tool to aid thinking was tapped in students' sorting of planning statements into expert and novice categories. For experimental purposes, the authors generated 18 phrases to represent planning strategies ranging from knowledge telling to reflective planning. Nine of these statements were examples of low level or novice thinking and nine were examples of high level or expert thinking. Experimental group students selected a significantly higher proportion of expert-like statements than did the control group students ($t(27)=2.66, p<.02$).

C. Reasons for Placement in Expert or Novice Category

The justifications for placement in either expert or novice category were examined to get a clearer picture of how the students understand the writing process. With instructions to disregard the "correctness" of placement, each justification was rated blind by two independent raters on a 5 point scale ranging from 1 (indicates a very unsophisticated understanding of the composing process) to 5 (highly sophisticated). Reliability equaled .88. When the total scores for each subject (from the two raters) were averaged, the experimental subjects displayed significantly more sophisticated understanding of the composing process ($t(26)=2.01, p=.05$).

The differences between the two groups can be illustrated with a few examples.

1. One of the planning phrases the subjects sorted was "I know enough about this topic that I can start right in writing." Nearly every subject decided that this was the kind of thinking that an inexperienced writer would exhibit (26 vs 3). However the reasons for this choice showed a clear difference between groups. The experimental subjects said a) "It's novice because I don't think you should just have the information about the topic. You also have to know how you're going to set it up and everything." b) It's novice because "even if they know enough they should still figure out how they're

going to say it." c) It's novice because "you still have to plan." d) It's novice because "you still should get all the consequences." The control subjects said a) It's novice because "nobody really knows enough about anything." b) It's novice because "they might not know enough about it. They might just think they know enough about it." c) It's novice because "there's always more to learn." and d) It's novice because "it's always good to do some research."

Thus, the subjects in both groups showed an appreciation of the need to have sufficient information before beginning to write. The difference showed up in the experimental group's understanding that something more is needed before starting to write - namely a plan - whereas the subjects in the control group seemed to feel that if they have adequate knowledge, that's all that's needed.

2. "My purpose in this essay will be to tell all I know about..." Three control subjects said this was an example of a novice strategy because you should do research and find out more than what you already know. Of the experimental subjects who selected this as a novice statement, only one indicated that criticism. The others said, for example, "it's boring to tell all you know;" "you have to include what you think, what other people think, how you could improve it, things you could point out;" "if you just tell all you know without any opinions or dramatics, it will be just like a report - not like an essay." Of the seven experimental subjects who selected it as an expert strategy, five said it was a good idea to have a purpose. None of the control subjects looked at it this way. Their most frequent reason for calling it an expert strategy was that "they want to show all their information" or "poor writers are too lazy." The experimental subjects either were hooked by the word 'purpose' or else they displayed an understanding that writing is not an opportunity to "tell all you know."

3. "Now I'll list all these facts so that I have a plan." All control subjects said that this was an example of an expert strategy either because it's important to plan or it's important to plan in order to organize your thoughts. Eleven experimental subjects also said this was expert and, while they too seemed swayed by the word 'plan', their justifications included the idea that writing down facts does not constitute a plan. They said, for example, it's expert because "they'd get all the facts and then they would write a plan. I suppose the facts are the notes then;" It's expert because "he'd take all the facts down first and then make a plan of some sort;" "An expert would list all the facts and then decide what to do;" "It has a plan. You'd read over your notes and figure out how to write your essay;" "That's like getting a goal - making a plan. Listing all the facts is like an ordinary writer but putting it into a plan is expert."

Five experimental subjects put this phrase in the novice category because "just listing all the facts wouldn't give you an attitude" or "you have to have a plan - but you have to make a plan", or "just listing facts doesn't give you much of a plan." Even though most of the experimental subjects put this phrase in the expert category, their reasons (as well as the reasons given by those who put it in the novice category) for doing so indicate that they see notetaking and planning as more than simply listing facts. This mature awareness of how notes and plans are used is generally not seen until grade 8 (Burtis et al, 1983).

Conclusions

The instructional experiment, to which the present study is a follow-up, grew out of extensive research on cognitive processes in composition planning and of ways to influence them. That experiment found statistical evidence that children in grade six could (at the local level) be enabled to sustain reflective processes in writing independently. In addition, the experimenters informally observed the beginnings of or

attempts at reflection at a higher level. This involved reshaping and elaboration of major goals and central ideas and the attempt to reconcile or synthesize different plans of attack or different intentions.

The purpose of the present study was to see if the cognitive changes which seemed to have occurred during the course of the intervention still persist one year later. The results reported here provide evidence that cognitive changes in the way the writing process is perceived did persist.

To summarize the findings, seventh graders from both the experimental and control groups indicated awareness of two principles: (1) that information is important for essay writing and (2) that planning is a good thing. For control group students, however, it appears that these two principles come to much the same thing, for to them planning is essentially content generation. Experimental group students, on the other hand, generally showed an awareness of planning as consisting of something beyond generating content. They could see planning as involving goals, decisions about how to achieve those goals, and formulation of attitudes and main ideas. Thus, at a conceptual level at least, the experimental group students were closer to viewing composing as a reflective rather than as a knowledge-telling process.

A natural question to ask is whether these differences at a conceptual level carried over into the students' actual writing. We attempted to get comparable samples of notes and texts on a substantial writing assignment from experimental and control students, but were successful in getting material on only 6 experimental and 6 control students. Trends were in the expected direction, but too weak to be statistically significant with such small numbers. Analysis of individual cases has proved informative, however, and some findings from these analyses will be discusssed by

Scardamalia in her invited address at this conference.

References

Burtis, P.J., Bereiter, C., Scardamalia, M., & Tetroe, J. The development of planning in writing. In C.G Wells & B. Kroll (Eds.) Exploration of children's development in writing. Chichester, England: John Wiley & Sons, 1983.

Scardamalia, M. & Bereiter, C. Assimilative processes in composition planning. Educational Psychologist, 1982, 17, 165-171.

Scardamalia, M., Steinbach, R., & Bereiter, C. Teaching independent reflective processes in writing. Paper presented at the American Educational Research Association annual meeting, Montreal, April, 1983.